The Socio-Economic Factor and the Oral Hygiene Absence, Determined as a Risk Factor Regarding the Children Gingival Diseases of Age 11-15

Healthcare

Keywords: Gingivitis, dental plaque, inflammatory cells, drugs, poor oral hygiene, dental anatomy and malnutrition, etc.

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Abstract

The Gingivitis are often defined as diseases that affect school-age children often causing pain and depression, accompanied with not a very good learning performance at school. Studies have shown a high prevalence related to them. Gingivitis is caused by local as well by systemic factors. Frequently, it is caused by an inadequate hygiene leading to inflammation, bleeding of the gum and the formation of a bacterial plaque. If left untreated it progresses to more severe gums diseases, such as periodontal diseases, up to the destruction of bone and tooth loss. (1,4) The main cause of gingivitis is the plaque, a thin adhesive layer formed over the teeth as a result of mixing food waste with bacteria that are found in the mouth. Children are more affected by gingivitis diseases, due to a specific building of periodontal and to the poor hygiene in the mouth. For this reason, the prevalence of gingivitis is very high in children, particularly in adolescence. The prevalence of gingivitis is different in different communities and it varies from 50-100%. (5,8) Gingivitis is the most common form of the gingival diseases in children aged over 5 years old. It is characterized by the presence of clinical signs of limited inflammation to the gingival (gums), which is accompanied with exposure of the tooth without loss of gums attachment. (2) Gingival disease caused by the dental plaque is the result of an interaction between microorganisms found in the dental plaque and to the inflammatory cells and tissues of the body. The interaction between the plaque and the body shall be alternated from the effects of local systemic factors or both; by drugs, poor oral hygiene, dental anatomy and malnutrition which can influence the rate and duration of response. (3,6) Gingival lesions, which are not caused by the dental plaque as an oral manifestations of the systemic conditions that cause lesions periodontium tissues are very rare. These are observed in groups with a lower social and economic development, in the developing countries and in individuals with a compromised immune system. (7.14).

The purpose

To determine the prevalence of gingivitis according to the social background, parents' educational level, referring to the hygiene and control level to the dentist for the children aged 11-15 years old.

The Material and Methodology

In this study were included 217 children of age 11-15 years old, in the period 2012-2014. Data collection was made based on a determined Template. In the first part of the template, is a questionnaire and the second part has a dental file, where is recorded the relevant data from target group which is being examined.

In order to conduct the examination it is used the dental set, gloves, mask, and the periodontal probe. Children of 11-15 years old, were selected as the target age group defined by WHO for the global monitoring of oral diseases and as a period of transition from childhood to adolescence age.

For all patients was followed this methodology of work: introduction of the questionnaire and the completion of this questionnaire by children or parents, the clinical examination sitting on the respective dental armchair with the dental set and completion of dental file with relevant data taken from the objective examination.

Löe and Silness method was used to determine the gingival index and determining the health level of the mouth. This is the most used index in epidemiological studies regarding the prevalence of gingivitis. (13) Factors such as the gums inflammation, gums colour and the presence of oedema (defined during direct observation) and bleeding (defined by probing) are key factors to determine the condition of gingival. State of the gingival was determined in reference to the following description: normal, average and advanced. (11)

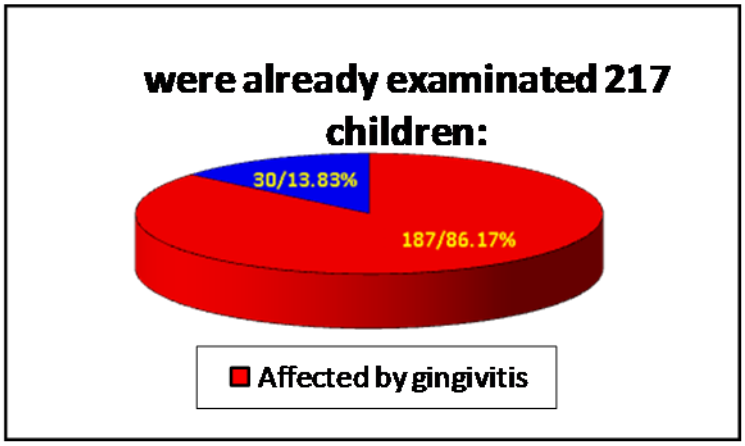
The criteria for the selection process of patients included in this study are as follows:

- In the study were included patients who had no dental and skeletal anomalies, without any history of previous orthodontic treatment.

- In the study were included patients clinically free of any chronicle disease, i.e. patients with normal health and body development.

The results

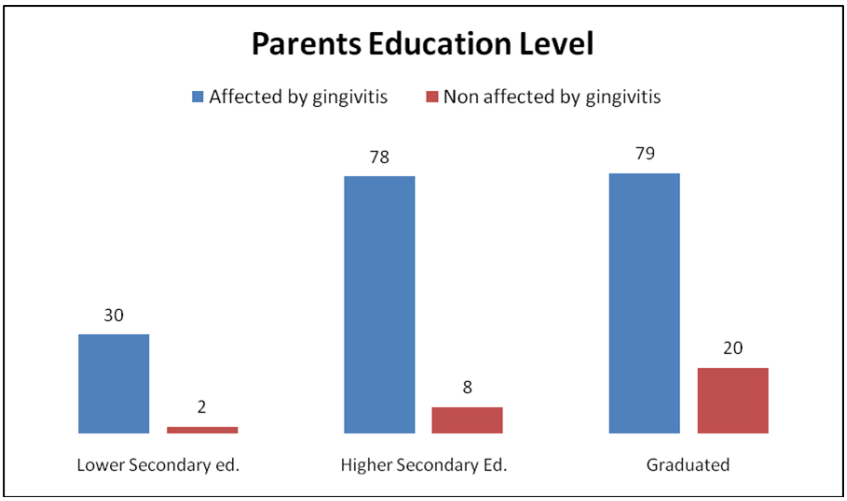
For conducting this survey are included 217 children aged 11-15 years from Vlora and Tirana. Results were analyzed in accordance with the social background, parents educational level and oral hygiene.



A major influence on the general and specific condition of the mouth is closely related with the parents' educational level of the involved children in this study. Thus, children with parents with university degree have lower prevalence levels of gingivitis compared to those with primary education.

Parents' Educational Level	Number of Children	Affected by gingivitis	Non affected by gingivitis	P- Value †
Lower Secondary ed.	32	30 -93.75%	2- 6.25%	0.046
Higher (university degree) Secondary ed.	86	78- 90.69%	8-9.4%	
Graduated	99	79 – 79.79%	20-36.4%	
Total	217	187-86.17%	30-13.83%	

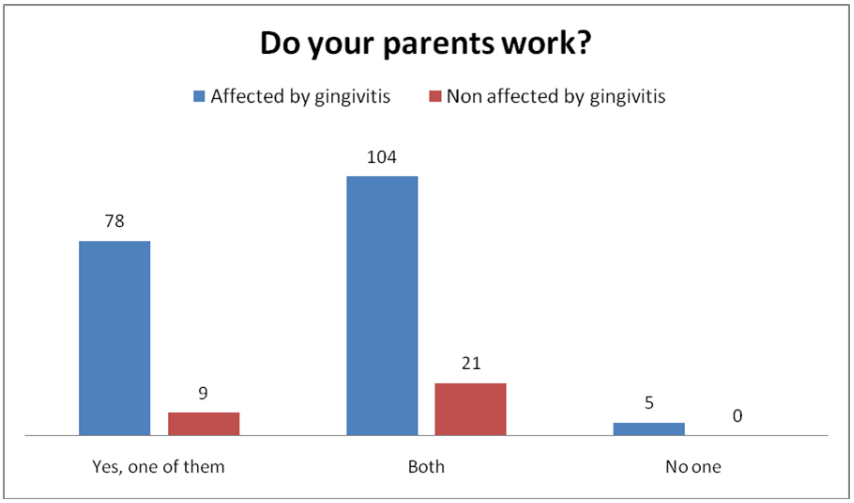
† P-Value second the Fisher's exact test.



Examined children refering to the level of parents' occupation

Do your parents work?	Examined children	Affected by gingivitis	Non affected by gingivitis	P- Value †
Yes, one of them	87	78-89.65%	9-10.35%	0.371
Both	125	104-83.2%	21-16.8%	
No one	5	5-100%	-	
Total	217	187-86.17%	30-13.83%	

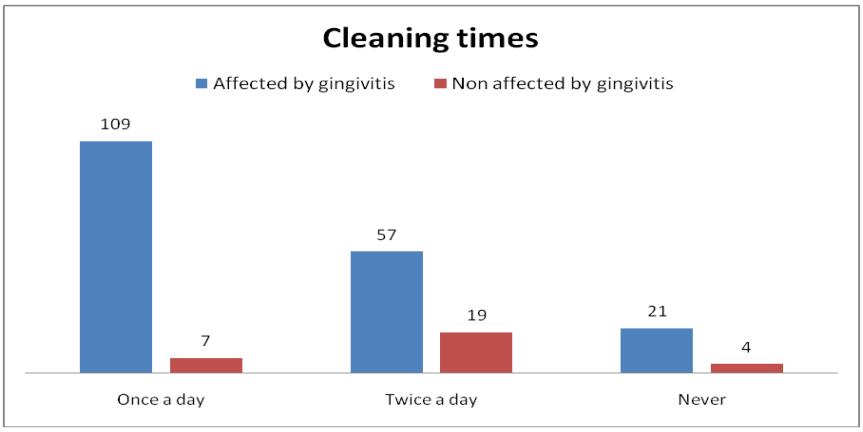
† P-Value second the Fisher's exact test.



Gingivitis prevalence based teeth cleaning times

Cleaning times	Examined Children Nr.	Affected by gingivitis	Non affected by gingivitis	P- Value †
Once a day	116	109-93.96%	7-6.04%	<0.001
Twice a day	76	57-75%	19-25%	
Never	25	21-84%	4-16%	
Total	217	187-86.17%	30-13.83%	

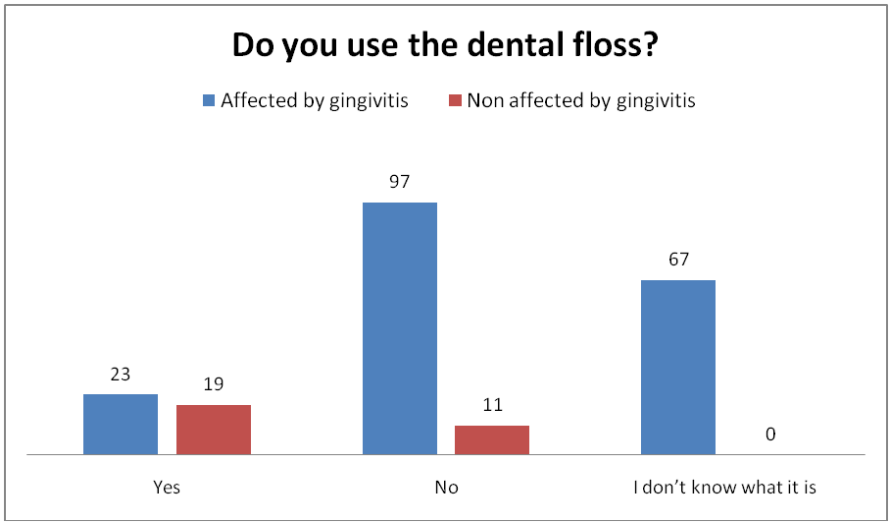
† P-Value second the Fisher's exact test.



Gingivitis prevalence based on the dental floss use

Do you use the dental floss?	Examined Children Nr.	Affected by gingivitis	Non affected by gingivitis	P- Value †
Yes	42	23-54.76%	19-45.24%	<0.001
No	108	97-89.81%	11-10.19%	
I don't know what it is	67	67-100%	-	
Total	217	187-86.17%	30-13.83%	

† P-Value second the Fisher's exact test.



Based on the results of this studies we can conclude:

1. 187 children or 86.17% of 217, from 11-15 years old, subject to the study was affected by gingivitis.
2. Based on intensity it was found that 113 children or 60.42% were affected by gingivitis at the first phase and 74 children or 39.58% with medium gingivitis.
3. The principal cause is the low oral hygiene.
4. The children whose parents are educated and employed show a higher level of knowledge and care for oral hygiene.
5. Washing regularly and daily the teeth can reduce significantly the gingivitis prevalence.

Recomandation

The school age children of today, shall be the future adults, so they shall be well educated.

The studies on the state of oral health and children education how to care for it at an early age will help to improve and to prevent these diseases.

The identification of factors which could have and impact on the prevalence of these diseases will not only improve the population health state, but will show the ways and the possibilities to minimize the consequences of the oral diseases through programs about dental care in schools.

References

1. Ainamo, J. and I. Bay, 1975. Problems and proposals for recording gingivitis and plaque. Int. Dent. J., 35: 251-261.
2. Am Laugsson, S. and T.E. Magnusson, 1995. Prevalence of gingivitis in 6 years old in Reykjavik, Icelan. Acta Odontol. Scand., 54: 242-252.
3. Benjamin, P., M. Elie and B. Enrique, 1993. Change in periodontal status of children and young adolescents: A one longitudinal study. J. Clin. Pediatr. Dent., 18: 3-6.
4. Breuer, M.M. and R.S. Cosgrove, 1989. The relationship between gingivitis and plaque levels. J. Periodontol., 60: 172-175.
5. Brown, L.J. and H. Loe, 1993. Prevalence, extent, severity and progression of periodontal disease. Periodontology, 2: 57-71.

6. Havold D.Sgan-Cohen,Rachel Lipsky and Ruth Behar; Caries, diet, dental knowledge and socio-economic. Variables in a population of 15 year old Isreli School Children, Community Dent oral Epidemioi. 1984; 12;332-336.
7. Dummer, P.M.H., M. Addy, R. Hicks, A. Kingdon and W.C. Shaw, 1987. The effect of social class on the prevalence of caries, plaque, gingivitis and pocketing in 11-12 year old children in South Wales. J. Dent., 15: 185-190.
8. Hagoson, A., G. Koch and H. Rylander, 1981. Prevalence and distribution of gingivitis, periodontitis in children and adolescents. Swed. Dent. J., 5: 91-103.
9. Makarem, A., 1987. Prevalence of gingivitis in Mashhad 12 years old children. Mashhad Uni.of Med. Sci., Thesis, No. 100 Mashhad, Iran pp: 150-156.Assoc., 30: 506-512.
10. Mofid, R. and J. Sadr, 1990. Evaluation of CPITNs in 6-15 years old Tehran children. Shhid Beheshti Uni. Med. Sci., Thesis No. 5. Tehran, Iran
11. Sayegh, A., E.L. Dini, R.D. Holt and R. Bedi, 2005. Oral health, sociodemographic factors, dietary and oral hygiene practices in Jordanian children. J. Dent., 33: 379-388.
12. Sirafi, M. and H. Moghaddass, 1988. Epidemiological evaluation of prevalence and intensity of gingivitis in children. Dam Darman J., 7: 15-75.
13. Cyril.O.Enwonwo; Review of oral disease in Africa and the influence of socio-economic factors. Int.Dent.J.1981:31:29-38.